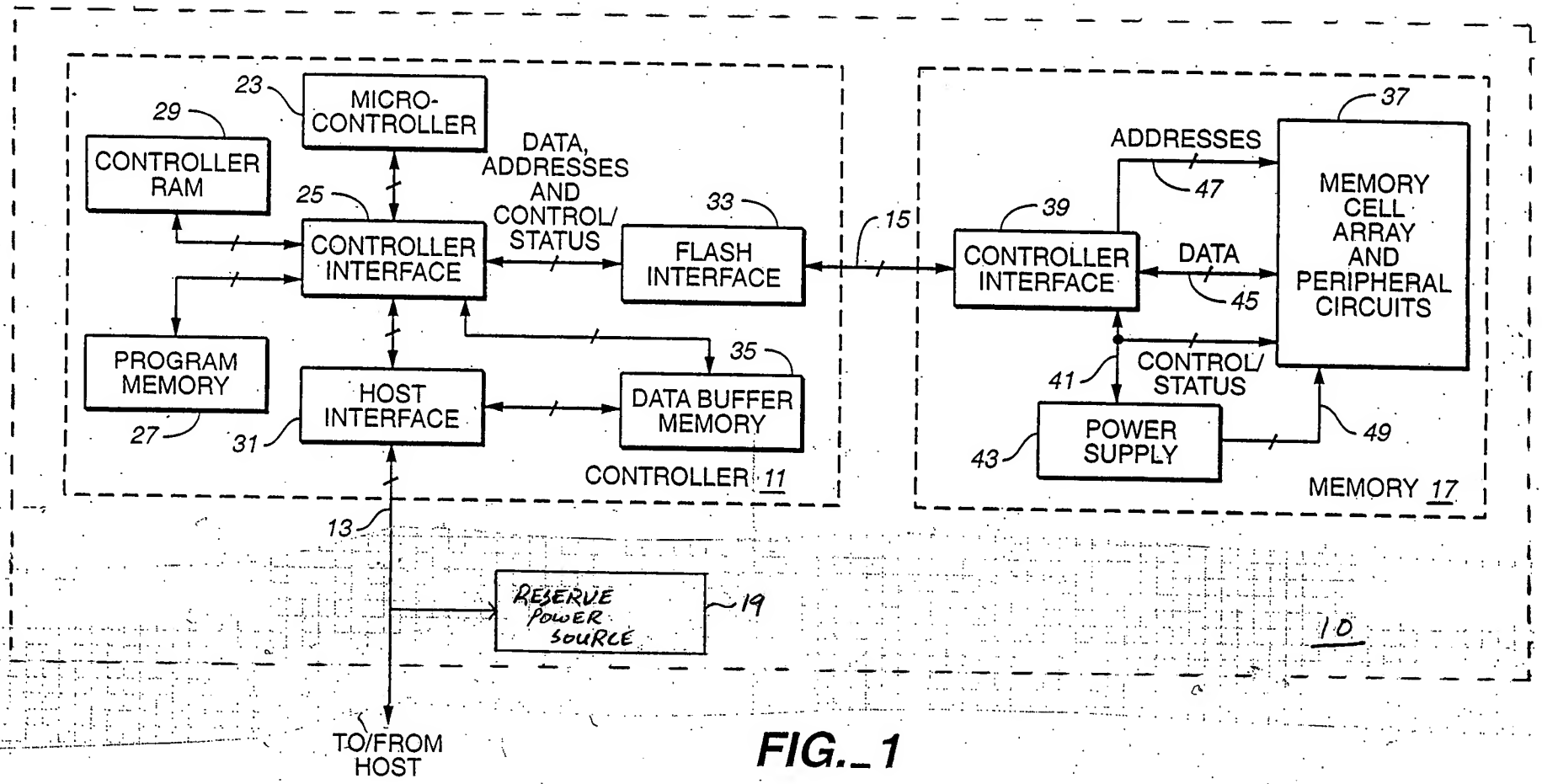

FIG._1

Appln. No.: Unknown Docket No.: SNDK.229US2
Title: Compressed Event Counting Technique...
Inventors: Mokhlesi Exp. Mail: EV 321705485 US
Filing Date: Herewith Atty. Tel: (415) 318-1160 Sheet 1 of 5

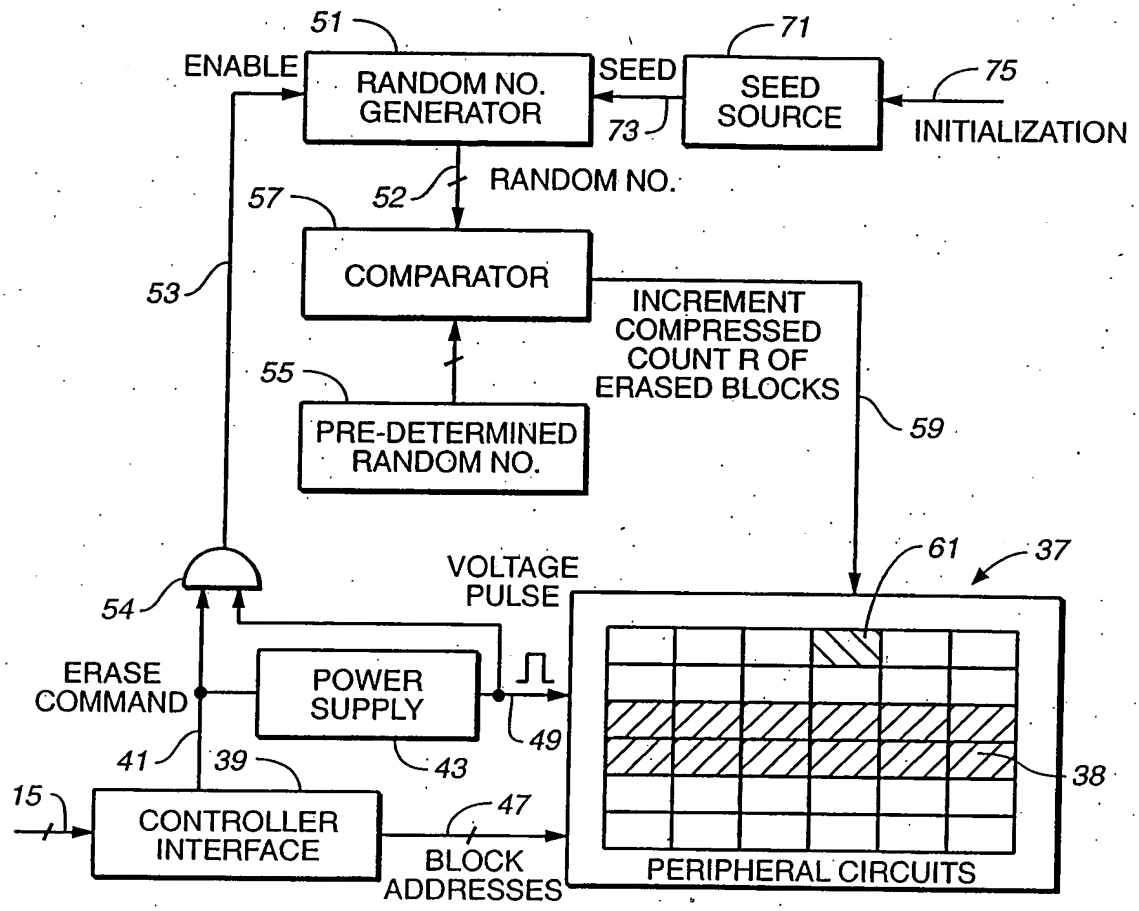

FIG._2

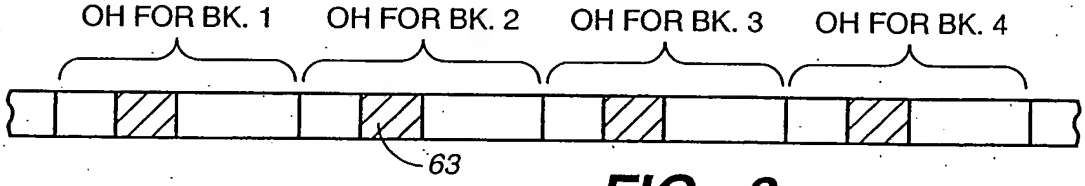

FIG._3 RESERVED BLOCK

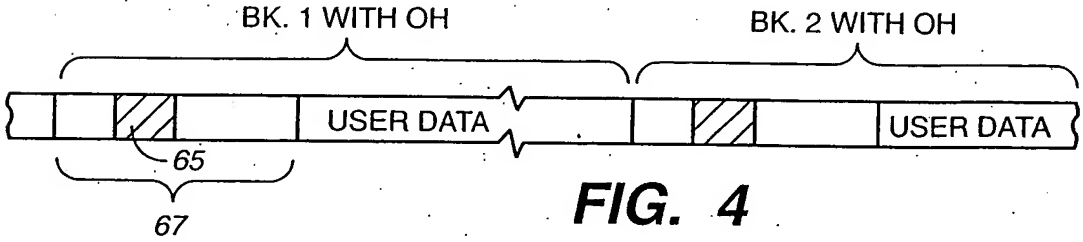

FIG. 4

3 /

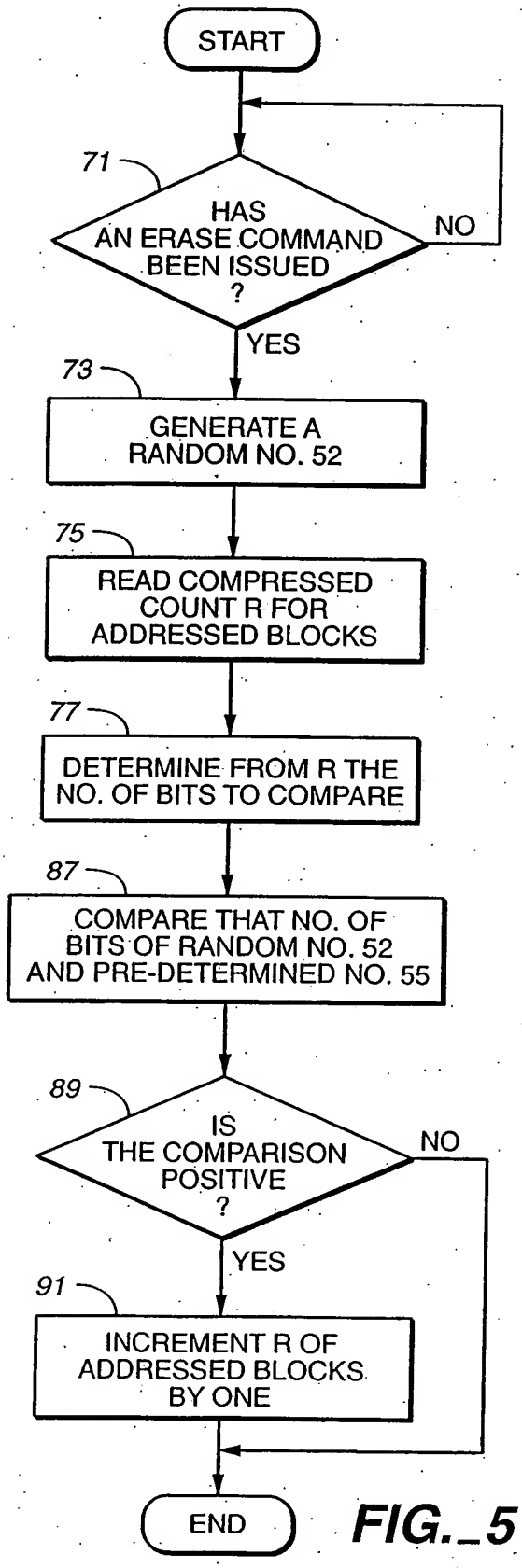
START
71
HAS AN ERASE COMMAND BEEN ISSUED ?
NO
YES
73
GENERATE A RANDOM NO. 52
75
READ COMPRESSED COUNT R FOR ADDRESSED BLOCKS
77
DETERMINE FROM R THE NO. OF BITS TO COMPARE
87
COMPARE THAT NO. OF BITS OF RANDOM NO. 52 AND PRE-DETERMINED NO. 55
89
IS THE COMPARISON POSITIVE ?
NO
YES
91
INCREMENT R OF ADDRESSED BLOCKS BY ONE
END

FIG._5

4 /

COMPRESSED COUNT R	NO. BITS COMPARED	PROBABILITY P
0-15	—	1.0
16-31	1	0.5
32-47	2	0.25
48-63	3	0.125
64-79	4	0.0625
80-96	5	0.03123
•	•	•
•	•	•
240-255	16	0.0000305

FIG._6

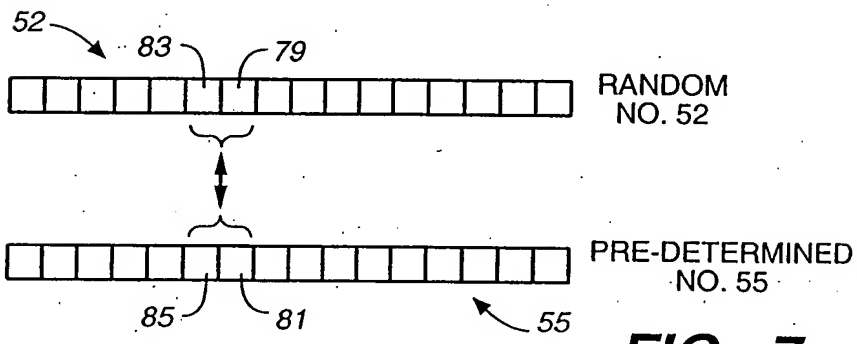

FIG._7

	COMPRESSED COUNT R	ACTUAL COUNT R	ERROR (STD. DEVIATION)
93	0	0	0
	1	1	0
	2	2	0
	•	•	•
	•	•	•
	15	15	0
95	16	$17 + X_{16}$	Y_{16}
	•	•	•
	•	•	•
	31	$47 + X_{31}$	Y_{31}
97	32	$52 + X_{32}$	Y_{32}
	•	•	•
	•	•	•
	47	$111 + X_{47}$	Y_{47}
99	48	$119 + X_{48}$	Y_{48}
	•	•	•
	•	•	•
	•	•	•

FIG._8

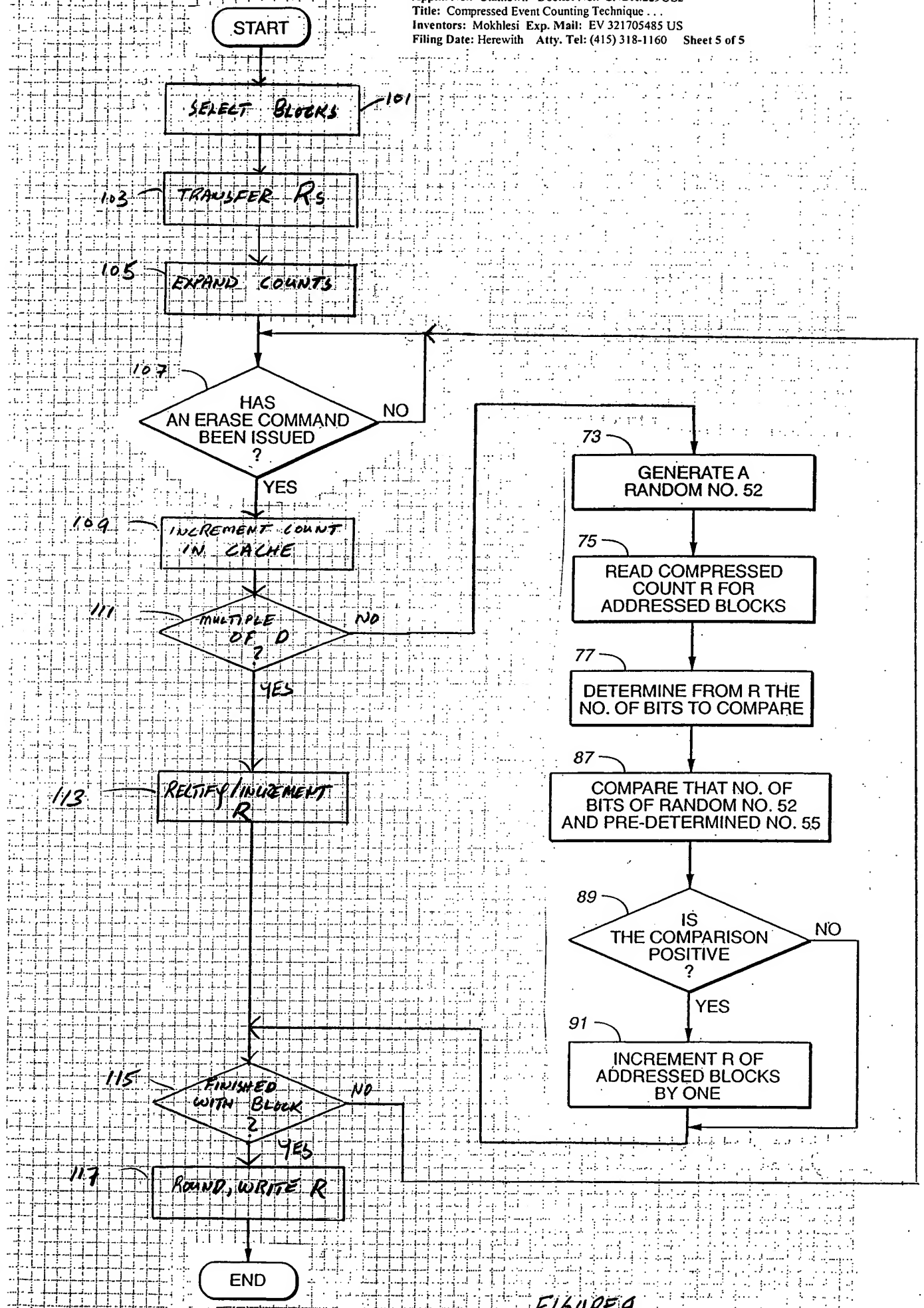
START
SELECT BLOCKS
101
TRANSFER Rs
103
EXPAND COUNTS
105
HAS AN ERASE COMMAND BEEN ISSUED ?
107
NO
YES
INCREMENT COUNT IN CACHE
109
MULTIPLE OF D ?
111
NO
YES
RECTIFY/INCREMENT R
113
FINISHED WITH BLOCK ?
115
NO
YES
ROUND, WRITE R
117
END
GENERATE A RANDOM NO. 52
73
READ COMPRESSED COUNT R FOR ADDRESSED BLOCKS
75
DETERMINE FROM R THE NO. OF BITS TO COMPARE
77
COMPARE THAT NO. OF BITS OF RANDOM NO. 52 AND PRE-DETERMINED NO. 55
87
IS THE COMPARISON POSITIVE ?
89
NO
YES
INCREMENT R OF ADDRESSED BLOCKS BY ONE
91

FIGURE 9